

Early Family Characteristics and Risk for Development of Aggressive and Disruptive Behavior in Childhood

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Prior Research

- Children who engage in aggressive and disruptive behavior (ADB) are at increased risk for involvement in criminal and deviant behavior during adolescence and adulthood (Broidy et al., 2003; Moffitt, 2006).
- ADB in childhood predicts a broad range of negative outcomes across the lifespan, such as criminal arrest and unemployment (Fergusson et al., 2000; Schaeffer et al., 2008).
- Patterson et al. (1989) described a series of family risk factors associated with an early onset of ADB, including ineffective parenting strategies and family stressors.
- There has been relatively limited research linking different patterns of early family risk factors with negative outcomes in childhood and adolescence.

Method

Participants and Measures

- The data in this project originate from the Johns Hopkins University's Center for Prevention and Early Intervention, in which data from 678 first grade students were collected beginning in the fall of 1993.

Table 1. Baseline Characteristics, N = 678

Baseline Characteristic	N (%)
Male	361 (53.2)
Free/Reduced Lunch	430 (63.4)
African American	589 (86.8)
White	90 (13.2)
Age in years, Mean (SE)	6.2 (0.34)

Table 2. Measures

Variable	Measure
Grade 1, Fall	
Parent Discipline	Structured Interview of Management Skills and Practices (SIPMSP)
Parent Rejection	SIPMSP
Parent Internalizing	University of Michigan-Composite International Diagnostic Interview (UM-CIDI); Panic, General Anxiety, and Major Depressive Disorder Modules
Family Death	Parent Interview
Family Illness	Parent Interview
Financial Difficulties	Parent Interview
Marriage Difficulties	Parent Interview
Grade 3, Spring	
Aggressive and Disruptive Behavior	Teacher Observation of Classroom Adaptation – Revised (TOCA-R)
Grade 6, Spring	
Aggressive and Disruptive Behavior	TOCA-R
Deviant Peer Association	TOCA-R
Grade 12, Spring	
Deviant Peer Association	TOCA-R
Reading Achievement	Kaufman Test of Educational Achievement (KTEA)
Math Achievement	KTEA
On-Time Graduation	School Records
Marijuana Use, Grades 6 – 14	Youth Interview

Objectives

- To examine whether there are distinct classes of first grade children with common early family characteristics using latent class analysis.
- To determine whether fall of first grade latent class membership predicts a variety of negative distal outcomes in grades 3, 6, and 12.

Results

Table 3. Fit Indices for Selected Latent Class Models

Number of Classes	BIC	SSABIC	LMR Adjusted LRT P-Value	Class Description (% based on estimated models)
1	3865.683	3843.458	-----	1: 100.00%
2	3754.462	3706.838	.0000	1: 27.15% 2: 72.85%
3	3787.702	3714.679	.7116	1: 3.91% 2: 15.24% 3: 70.84%

Figure 1. Sample Proportions for Two-Class Latent Class Model

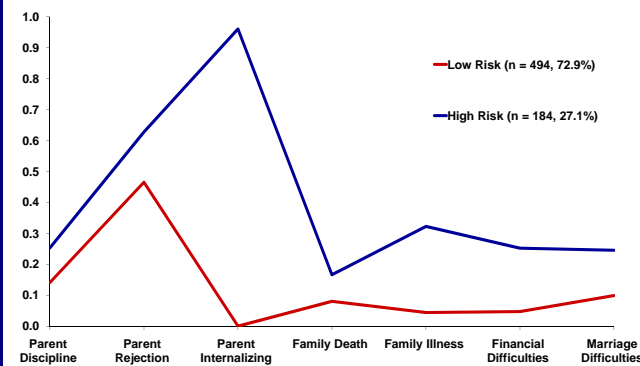


Table 4. Sample Proportions for Two-Class Latent Class Model

Family Characteristic	Low Risk (n = 494, 72.9%)	High Risk (n = 184, 27.1%)	% Difference	P-Value
Parent Discipline	14.1%	25.3%	11.2%	.0007
Parent Rejection	46.5%	62.7%	16.2%	.0002
Parent Internalizing	0.0%	96.0%	96.0%	< .0001
Family Death	8.0%	16.6%	8.6%	.0007
Family Illness	4.4%	32.2%	27.8%	< .0001
Financial Difficulties	4.7%	25.2%	20.5%	< .0001
Marriage Difficulties	9.9%	24.5%	14.6%	< .0001

- Fit indices indicated that a 2-class model best fit the data, suggesting that there were high and low risk classes of children with various family characteristics at the fall of first grade.
- Gender, race, and free and reduced meal status (a proxy for SES) were not statistically significantly associated with class membership, and thus, were not included as covariates in subsequent analyses.

Table 5. Predictive Validity of Latent Class Membership for Third-, Sixth-, and Twelfth-Grade Outcomes

Distal Variable	Low Risk (72.9%), Mean (SE)	High Risk (27.1%), Mean (SE)	χ^2 (df = 1)	P-Value
Aggressive and Disruptive Behavior, Grade 3	1.845 (0.046)	2.070 (0.095)	4.373	.037
Aggressive and Disruptive Behavior, Grade 6	1.406 (0.025)	1.527 (0.058)	3.423	.064
Deviant Peer Association, Grade 6	1.685 (0.032)	1.828 (0.061)	4.032	.045
Deviant Peer Association, Grade 12	1.383 (0.024)	1.411 (0.051)	0.230	.632
Marijuana Use, Grades 6 - 14	0.642 (0.023)	0.696 (0.037)	1.520	.218
Graduate After Grade 14	0.409 (0.023)	0.500 (0.041)	3.496	.062
Reading Achievement, Grade 12	42.113 (0.294)	41.087 (0.582)	2.391	.122
Math Achievement, Grade 12	42.491 (0.491)	40.889 (0.873)	2.494	.114

Higher mean values indicate more negative outcomes, except in the case of Reading and Math Achievement.

- Membership in the higher risk class significantly predicted both higher teacher ratings of third grade aggressive and disruptive behavior, and higher teacher ratings of sixth grade deviant peer association.
- Similarly, membership in this riskier latent class was moderately associated with higher teacher-rated aggressive and disruptive behavior in sixth grade, and with a higher probability of late graduation.

Discussion

- Latent class analysis allowed us to examine the effects of family characteristics at the individual level, when using variable-centered approaches would have resulted in losing the detail in this heterogeneous sample. We identified two unique groups of children with particular patterns of family risk characteristics. Children in the high risk class experienced statistically significantly higher proportions of these factors than their peers in the low risk class.
- The longitudinal design of this study permitted the exploration of early family risk over time, as well as the examination of the association between family characteristics and a variety of outcomes. Consistent with Patterson et al.'s (1989) theory, several negative outcomes were more likely among children in the higher risk class, including aggressive behavior and deviant peer relationships.
- Understanding the role that early family factors play in the development of aggressive and disruptive behavior and other negative life outcomes could have significant implications for prevention programming, including encouraging early screening and designing more precisely timed and specifically focused preventive interventions.

Selected References

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